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VULNERABILITY AND RISK ASSESSMENT OF HIGH-RISK AREAS OF CABANATUAN CITY, PHILIPPINES TO FLOOD HAZARD

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ABSTRACT

This study entitled “Vulnerability and Risk Assessment of High-Risk Barangays of Cabanatuan City to Flood Hazard” was conducted to assess the vulnerability and risk of high-risk barangays of Cabanatuan City in terms of exposure, sensitivity and its adaptive capacity. It assessed the number of people exposed, the sensitivity or threat level of each barangay and its capacity to withstand or cope with flooding or its adaptive capacity. The research method used was descriptive analytical method to be able to analyze the degree of vulnerability of high-risk barangays of Cabanatuan City based on its present condition. The data gathering procedure was done through survey form which contains the exposure, sensitivity, and adaptive capacity and was also done through personal interview with the leaders of high-risk barangays. Other data were gathered in the City Disaster Risk Reduction Management (CDRRMO). The statistical treatment used was percentage for the proper scoring of data gathered and weighted mean for the average threat level and adaptive capacity. The scoring was used to determine the vulnerability of the high-risk barangays of Cabanatuan City. The result shows that 3 of the 6 high risk Barangays namely; Barangay San Roque with 612 persons per hectare, Barangay Aduas Sur with 259 persons per hectare, Barangay M.S. Garcia with 205 persons per hectare has a high population density which makes them more exposed to the hazard. The high-risk barangays of Cabanatuan City has a threat level or sensitivity of 2.46 and an average adaptive capacity of 2.67, and a relative vulnerability of 0.92. For the risk estimation the likelihood of occurrence (LOO) got an average score of 6 with a verbal description of frequent or very likely and the Severity of consequence got an average of 3.33 which makes the risk estimation to yield an average of 20 which categorized as “high”. The study serves as the fundamental of the creation and formulation of the Local Climate Change Action Plan to improve the present adaptive capacity of high-risk barangays to avoid the hazards serious effects in both the community and the environment)

Keywords: adaptive capacity, cabanatuan city, flood hazard, risk assessment, high-risk, vulnerability